

A NEW SPECIES OF RHYNCHOSTEGIOPSIS FROM COSTA RICA

(HOOKERIAEAE, MUSCI)

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The genus Rhynchostegiopsis is notable among the Hookeriaceae for its hypnoid habit with the species vegetatively resembling large specimens of Brotherella. The large leaf cells and coarse serrations are additional vegetative features. Distinctions from hypnoid genera and sematophylloid genera such as Brotherella include the lack of differentiated alar cells and the peristome teeth with a prominent median furrow. Rhynchostegiopsis is rather distinct among the Hookeriaceae by the calyptra which is conical in young material and which either falls early or may become cucullate (Welch, 1966). Such a calyptra is more reminiscent of families like the Leucomiaceae but the two genera presently placed in the latter family have entire leaf margins. Rhynchostegiopsis occurs in Mexico, Central America, the West Indies and western South America south to Bolivia.

Recently collected specimens of Rhynchostegiopsis from Costa Rica are distinctive in the prominent tufts of greenish to reddish propagula on the base of the abaxial surface of the upper leaves. The propagula are not on all leaves but are found somewhere on almost all stems of any length including those connected to fully developed capsules. There is a slightly differentiated area of cells at the leaf base from which the tufts arise and such an area is suggested in the illustration of R. complanata C.Müll. by Brotherus (1925), but there is no record of propagula in that species or in other described species of the genus. The tufts of propagula seem distinctive in the genus, but similar tufts have been seen in an unnamed species of Cyclodictyon from Mexico.

Rhynchostegiopsis costaricensis H.Robinson & D.Griffin, sp. nov.

Planta dioica medicocris flavo-viridis subnitida. Caules elongati prostrati irregulariter paucè ramosi, fasciculis centralis nullis, cellulis superficialibus paulum minoribus. Folia uniformia subimbricata falcato-secunda 1.0-1.5 mm longa 0.3-0.4 mm lata apice peranguste acuminata superne valde argute

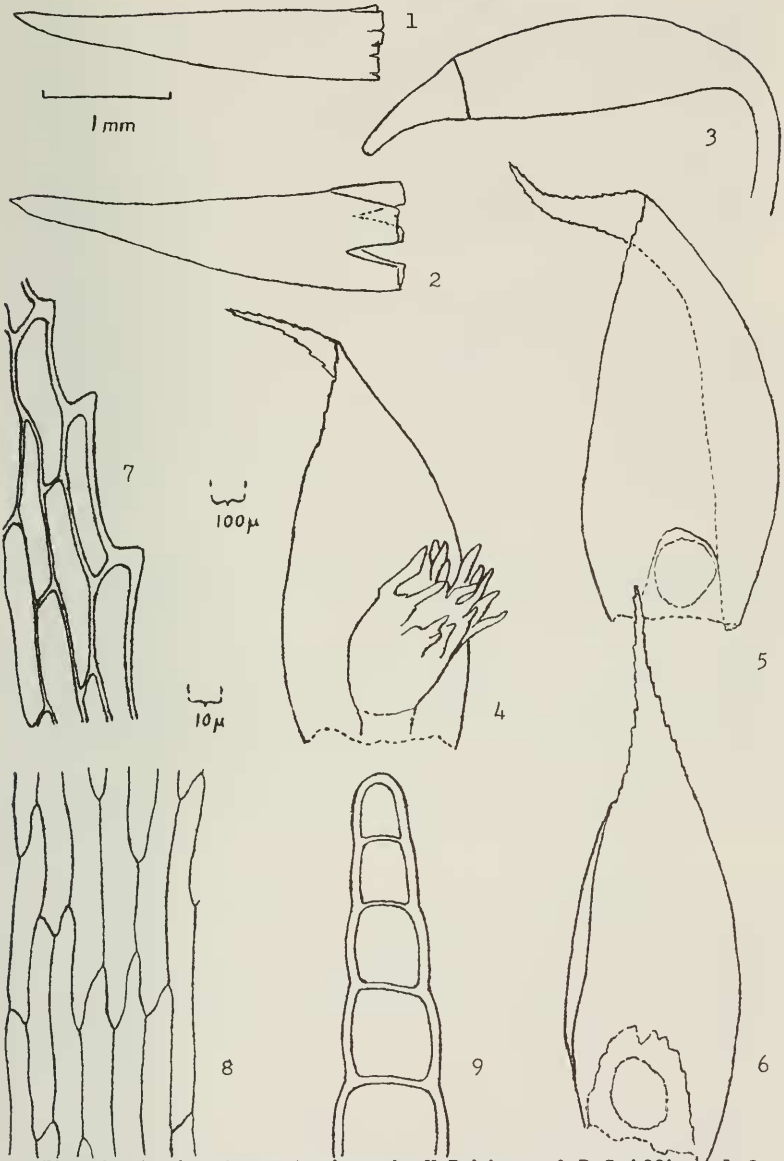
serrata, parietibus apicalibus dentium incrassatis, cellulis mediis prosenchymatis  $75-125 \mu$  longis  $10-15 \mu$  latis, cellulis basilaribus latioribus  $35-40 \mu$  latis, parietibus pertenuis, cellulis alaribus distinctis nullis; folia ventralis in partibus discoideis juxta basem saepe propagulifera, fasciculis propagulorum prominentibus densis viridibus inferne sendim rubris; propadula longe fusiforme multicellularia uniserialia usque ad  $500 \mu$  longa  $15-25 \mu$  lata, cellulis  $25-40 \mu$  longis, parietibus exterioribus firmis. Perichaetia lateralialia, folia abrupte longe acuminata. Calyptrae ca. 3 mm longae irregulariter fissae interdum subcucullatae glabrae. Setae ca. 15 mm longae glabrae rubescentes. Thecae inclinatae  $1.0-1.5 \text{ mm}$  longae oblongae ovaes deperculatae  $1.5-2.0 \text{ mm}$  longae; peristomium duplex, dentibus exterioribus 16 rubris ca.  $450 \mu$  longis extus dense transverse lamelliferis ad medium longitudinaliter exarata, peristomiis interioribus in partibus superioribus dentes non oppositis, membranarum basilaribus altis, ciliis 1-2 brevibus vestigialibus, cellulis exothecialibus subquadratis cel breviter oblongis  $25-40 \mu$  longis ca.  $25 \mu$  latis, parietibus longitudinalibus crassioribus; opercula breviter rostrata ca. 1 mm longa. Sporae ovaes diam. ca.  $20-25 \mu$  minute papillosae.

Type: COSTA RICA: Alajuela: Parque Nacional Volcán Poás, Clusia forest, east rim of crater. Plants on downed log. alt. 2450 m, 3 Sept. 1973. D.Griffin 92 (US, holotype; FLAS, isotype). Paratypes: COSTA RICA: Alajuela: Parque Nacional Volcán Poás, bosque pluvial montano bajo, bosque de Clusia, falda oriental del cráter, sobre tronco caído decorticado. alt. 2300-2700 m, Agosto, 1973. D.Griffin, M.I.Morales Z. D.Eakin & G.Canessa 92 (US, FLAS); San Jose: km. 73, Carretera Pan-americana sur. Sobre tronco caído. ca. 2300 m, 20 Sept. 1974. M.I.Morales Z. 21429 (FLAS).

At present the species is known only from the two separate localities in central Costa Rica.

#### Literature Cited

- Brotherus, V. F. 1925. Musci (Laubmoose) 2. Hälfte in A.Engler & K.Prantl, Die Natürlichen Pflanzenfamilien, ed. 2. 11: 1-542.
- Welch, W. H. 1966. The Hookeriaceae of Mexico. The Bryologist 69: 1-68.



*Rhynchostegiopsis costaricensis* H. Robinson & D. Griffin. 1-2. Calyptrae. 3. Capsule. 4-6. Dorsal leaves. 7. Cells of upper leaf margin. 8. Median leaf cells. 9. Part of propagulum.